Watershed Evaluations

03050208-010

(Combahee River)

General Description

Watershed 03050208-010 is located in Colleton and Beaufort Counties and consists primarily of tributaries of the ***Combahee River***. This watershed occupies 167,626 acres of the Lower Coastal Plain and Coastal Zone regions of South Carolina. The predominant soil types consist of an association of the Bohicket-Bladen-Coosaw-Capers-Wahee series. The erodibility of the soil (K) averages 0.12, and the slope of the terrain averages 1%, with a range of 0-6%. Land use/land cover in the watershed includes: 43.7% forested land, 24.4% forested wetland, 14.4% nonforested wetland, 8.8% agricultural land, 2.7% barren land, 5.5% water, and 0.5% urban land.

The Combahee River is formed by the confluence of the Salkehatchie River and the Little Salkehatchie River watersheds. Downstream of the confluence, the Combahee River accepts drainage from Bull Creek, Black Creek, and Cuckolds Creek (Bluehouse Swamp, Folly Creek). Further downstream, the Chehaw River (Social Hall Creek) enters the Combahee River followed by the New Chehaw River and a portion of the Ashepoo-Coosaw Cutoff at the base of the watershed. There are a total of 138.1 stream miles, 39.0 acres of lake waters, and 4,362.4 estuarine acres in this watershed. Upstream of the saltwater intrusion (in the vicinity of U.S. Hwy 17), the Combahee River and its tributaries are classified FW; downstream of the intrusion, the Combahee River and its tributaries are classified SFH.

Surface Water Quality

Station #	Type	Class	Description
CSTL-583	BIO	FW	BLACK CREEK AT U.S. HWY 21
CSTL-111	S	FW	COMBAHEE RIVER BELOW YEMASSEE SEWAGE OUTFALL
CSTL-098	P	FW/SFH	COMBAHEE RIVER AT U.S. HWY 17, 10MI ESE OF YEMASSEE

Black Creek (CSTL-583) **–** Aquatic life uses are fully supported based on macroinvertebrate community data.

Combahee River **–** There are two monitoring stations along the Combahee River. Aquatic life uses are fully supported at the upstream site ***(CSTL-111)***. This is a blackwater system, characterized by naturally low pH and dissolved oxygen concentrations. Although dissolved oxygen and pH excursions occurred, they were typical of values seen in blackwater systems and are considered natural, not standards violations. Significant decreasing trends in five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters. Recreational uses are fully supported at this site.

The downstream site ***(CSTL-098)*** is located in an area that is transitional between fresh and salt waters. Under the freshwater standards, aquatic life uses are fully supported. Although dissolved oxygen

excursions were noted, they were typical of values seen in such transitional areas and are considered natural, not standards violations. There is a significant decreasing trend in dissolved oxygen concentration and a significant increasing trend in turbidity. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. In sediment, bis (2-ethylhexyl) phthalate was detected in the 1996 sample, and P,P'DDD, a metabolite of DDT, was detected in the 1997 sample. Although the use of DDT was banned in 1973, it is very persistent in the environment. Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

Under the saltwater standards, aquatic life uses are also fully supported. Although dissolved oxygen and pH excursions of the saltwater standards were noted, they were typical of values seen in such transitional areas and are considered natural, not standards violations. There is a significant decreasing trend in dissolved oxygen concentration and a significant increasing trend in turbidity. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. In sediment, bis (2-ethylhexyl) phthalate was detected in the 1996 sample. In the 1997 sample P,P'DDD, a metabolite of DDT, was measured in excess of the TEL value, but was less than the PEL value (McDonald, 1994). Recreational uses are fully supported at this site and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

In an effort to remove aquatic plants at public access points, the main river channel, and connecting lakes, aquatic herbicides were applied in 1998,1999, and 2002, and there are plans to apply herbicides in 2003.

A fish consumption advisory has been issued by the Department for mercury and includes the Combahee River within this watershed (see advisory p.58).

Shellfish Monitoring Stations

Station #	Description
14-05	COMBAHEE RIVER INLET AND COOSAW RIVER

NPDES Program

Active NPDES Facilities

RECEIVING STREAM ***FACILITY NAME*** ***PERMITTED FLOW @ PIPE (MGD)***	***NPDES#*** ***TYPE*** ***COMMENT***
COMBAHEE RIVER TOWN OF YEMASSEE PIPE #: 001 FLOW: 0.24	SC0025950 MINOR DOMESTIC

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

LANDFILL NAME	***PERMIT #***

FACILITY TYPE	*STATUS*
CITY OF WALTERBORO C&D	----------
C & D	PENDING
HURRICANE #3	----------
DOMESTIC	PENDING

Growth Potential

There is a low potential for growth in this watershed, which contains the Town of Yemassee.